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ABSTRACT

This report examines the status of women in Minnesota's schools, with emphasis on the effect of education on women's economic status. Educational attainment for Minnesota women is above the national average. Thirty-two percent of women in the state, compared with 28 percent of American women generally, have some post-secondary education. In Minnesota, women have consistently higher labor force participation rates than the national average. However, women's earnings average less than men's at every educational level, paralleling national patterns. State department statistics show that in Minnesota women are nearly half or more of students in three of the six areas of higher math and science. Performance assessment data indicate that the relative scores of females to males have improved somewhat in math but show little improvement in science. Most secondary females and males are enrolled in traditional areas. Employment patterns in Minnesota public schools continue to reaffirm students' impressions that certain jobs belong to men and others to women, e.g., most administrators are male. The report concludes that efforts to achieve educational equity must continue. (RM)

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EQUITY in EDUCATION TASK FORCE REPORT

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Commission on the Economic Status of Women

SP 016 600

Equity in Education Task Force Report
December 1984

The COMMISSION ON THE ECONOMIC STATUS OF WOMEN is a legislative advisory commission established by the Minnesota legislature in 1976. Commission members include state senators and representatives. The Commission studies all matters relating to the economic status of women in Minnesota and publishes reports and recommendations to the legislature and to the Governor.

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INTRODUCTION

Educational opportunity has long been valued in this country. Education is considered essential to maintaining a democratic nation. Educational attainment is an important determinant of a person's social and economic status.

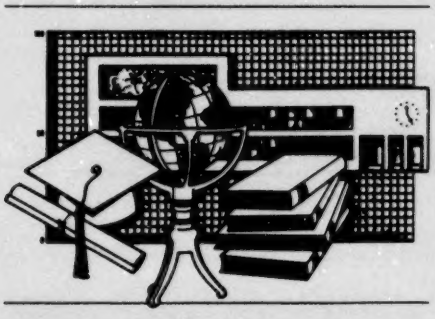
Minnesota has a strong commitment to education. The state ranks fifteenth in the nation in the amount of money spent per capita on education. Thirty percent of the state's budget is for elementary and secondary schools. The appropriation for post-secondary institutions brings the total allocation for education to forty percent of the state's biennial budget. For the 1984-85 biennium this amounted to 2.9 billion dollars for elementary and secondary schools and 90 million dollars for post-secondary education.

It is difficult to assess the return on this investment in education. Educational attainment for Minnesotans is above the national average. Thirty-seven percent of Minnesotans compared with thirty-two percent of Americans generally have some post-secondary education. More than one million Minnesotans, over one-fourth of the state's population, are enrolled in school.

Historically, schools have reflected and reinforced societal stereotypes about appropriate roles for women and girls. Only in the past decade have sex bias and discrimination in education emerged as major public policy issues. There have been a number of initiatives at the state and federal levels to address the equity issue. Perhaps the most well-known effort was the passage by Congress of Title IX of the Education Amendments of 1972 prohibiting sex discrimination in education.

An examination of some of the facts regarding the participation and experiences of females and males in education suggests that education, like many other institutions, continues to transmit past assumptions regarding female and male roles in many ways. Despite the significant developments of recent years, education is not yet providing young women and men with the diversity of knowledge and skills they will need for their future occupational and family roles.

This report examines the status of women and girls in Minnesota's schools, with emphasis on the effect of education on women's economic status.



EDUCATIONAL ATTAINMENT

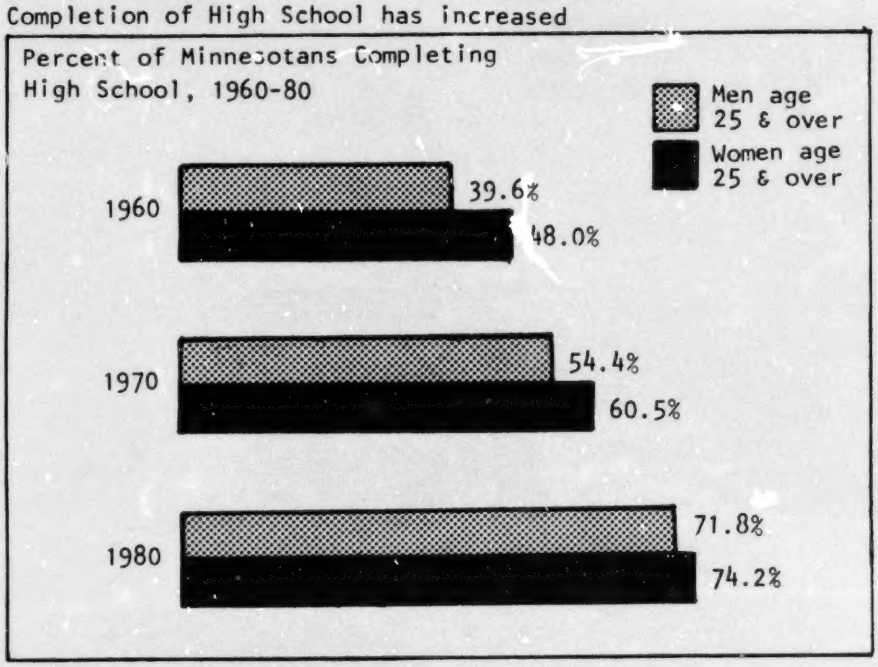
Levels of educational attainment differ for women and men. In the past, women were more likely than men to be high school graduates, but were less likely than men to have attended post-secondary institutions or to hold college degrees. Both women and men are pursuing higher levels of education than in the past, and there is some evidence that differences in educational attainment are decreasing.

Completion of high school has become a societal expectation for both girls and boys. Among those age 25-44, ninety-two percent of women and ninety percent of men have completed 12 or more years of education. Women's participation in post-secondary education has increased, but women are still less likely than men to have pursued education at this level. Among persons over age 25, thirty-two percent of women, compared with thirty-seven percent of men, have some post-secondary education.

A survey of female high school graduates from the Class of 1980 one year after their graduation shows that about three-fifths are continuing their education and nearly one-third are engaged in paid employment. These patterns, almost identical to those of male graduates in the same year, demonstrate the commitment of today's young women to post-secondary education.

Increases in the level of educational attainment of women are particularly striking when comparing women 65 and older with their daughters and granddaughters. While only about forty percent of women age 25-44 have have completed high school, the percentage with some post-secondary education has more than doubled in this period. Forty-four percent of the younger women and only nineteen percent of the older women have had some college.

Completion of High School has increased



CORRECTION, Equity in Education Task Force Report, page 3

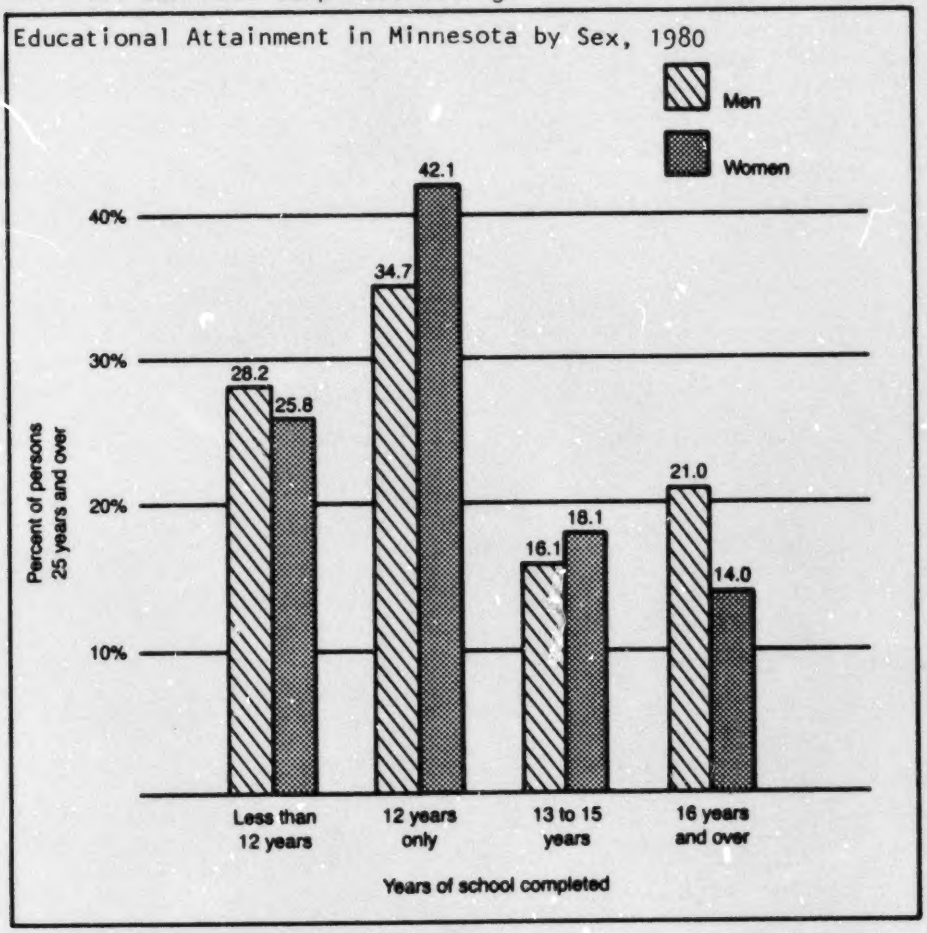
The second sentence of the last paragraph should read as follows:

While only about 40 percent of the older women are high school graduates, more than 90 percent of women age 25 to 44 have completed high school, and the percentage with some post-secondary education has more than doubled in this period.

Women outside the seven-county metro area have generally lower educational levels than women in the Twin Cities. However, educational attainment has increased in Greater Minnesota as well. In the 80 counties outside the metro area, thirty-eight percent of women age 25-44 have some post-secondary education compared with eighteen percent of women age 65 and over.

Educational attainment for Minnesota women is above the national average. Thirty-two percent of women in the state, compared with twenty-eight percent of American women generally, have some post-secondary education.

Most Minnesotans are high school graduates, but more men have completed college



EDUCATION AND ECONOMIC STATUS

Education has probably never been more essential for economic well-being than in today's increasingly technological society. This fact is particularly important for women because women's economic status and their educational opportunities are directly linked.

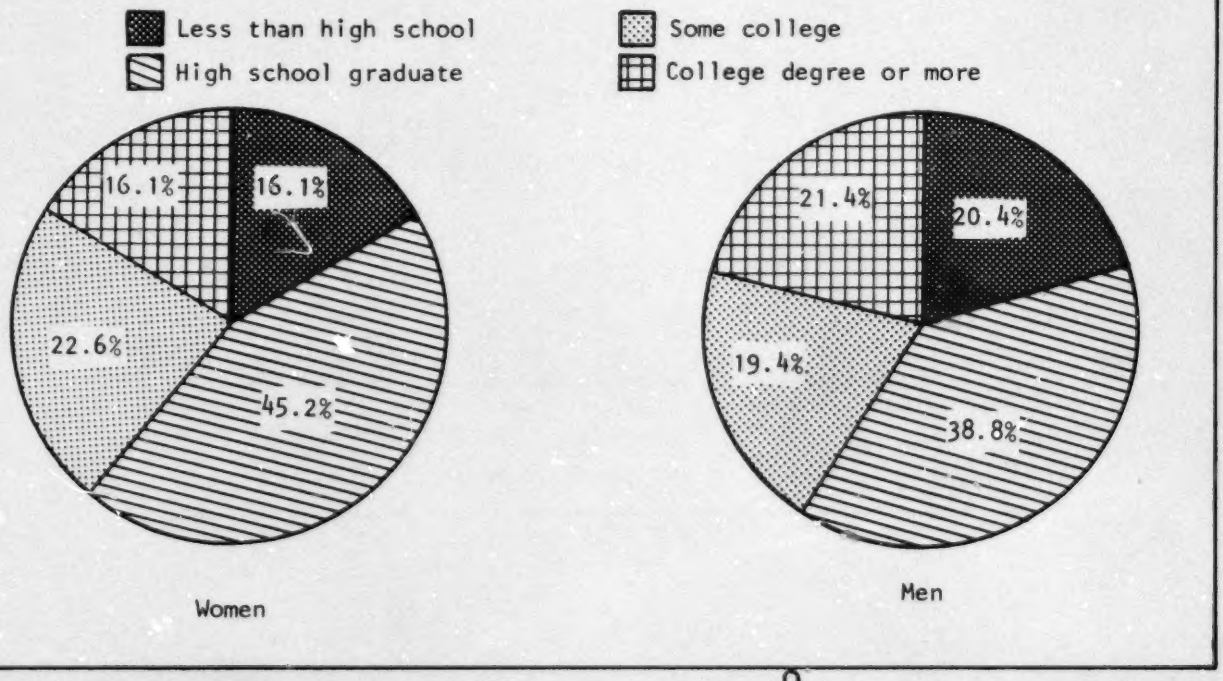
Today more than ever women are firmly established members of our nation's paid work force. Women account for forty-three percent of the labor force. In Minnesota women have consistently higher labor force participation rates than the national average. One reason for the differences may be the generally higher level of educational attainment, since education is strongly associated with labor force participation.

Nearly two-thirds of women of usual working age, 16-64, are in the work force. Labor force rates have increased for women regardless of marital and parental status. The greatest increase has been for women age 25 to 34. This is striking because the majority of these women are married and have children - factors which once tended to keep women at home full-time. In fact, half of mothers of pre-schoolers and two-thirds of school age children are now in the labor force.

While women have obtained jobs in just about every field of employment, the majority of women continue to work in traditional professional, clerical and service jobs. Despite recent attention to women entering previously all-male occupations, eighty percent of women are still concentrated in virtually all-female occupations. Three-fifths of employed women are found in only ten of the seventy occupational groups. More than one-third of employed women in the state hold just five occupations.

Educational levels of employed women and men are similar

Labor Force Participation by Educational Attainment, Minnesotans 16 years and over



Earnings for both women and men increase with increasing levels of educational attainment. However, Minnesota parallels national patterns in that women's earnings average less than men's at every educational level.

On the average female college graduates earn about the same as men with an eighth grade education - and women who have attended graduate school earn less than male high school dropouts. Female high school graduates earn 56 cents for every dollar earned by their male counterparts, while female college graduates earn an average of 62 cents for every dollar earned by men with this much education.

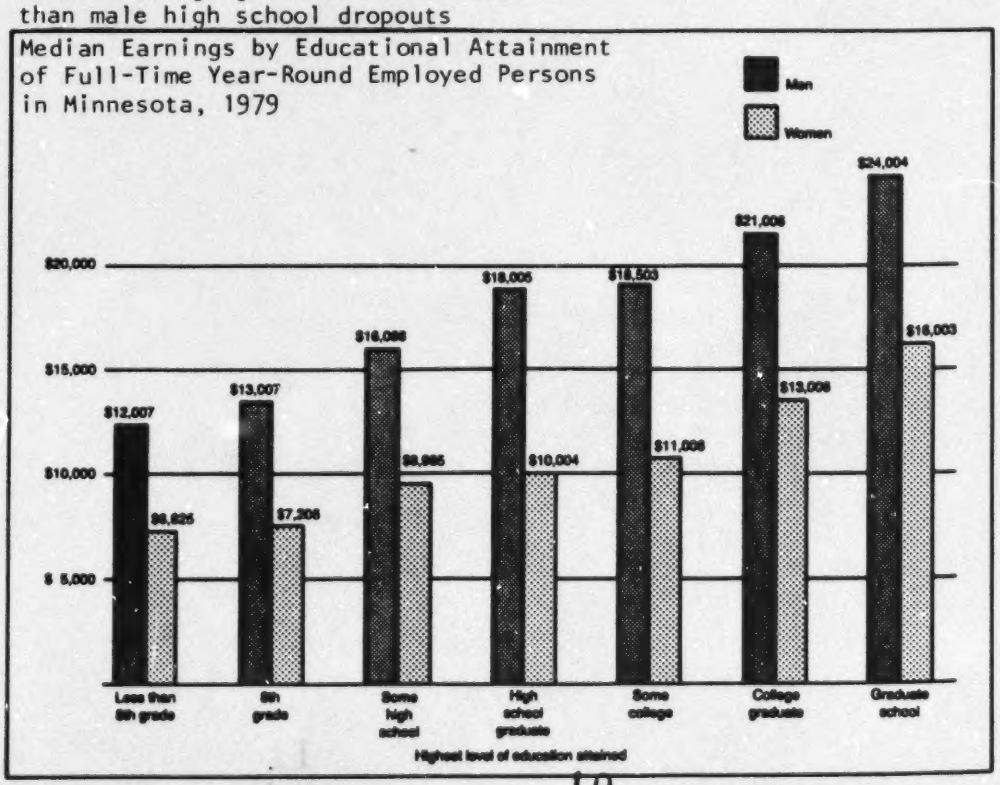
The earnings gap has been widely studied and the gap persists even when controlling for factors such as occupation, industry, geographic area, labor force experience and other characteristics of employed persons and their jobs.

The majority of unpaid work in the home continues to be done by women. Because women's work in the home remains unrecognized financially, full-time homemakers who are left alone often find themselves without minimal financial security.

The number of female-headed households has increased dramatically and one-third of these households had poverty level incomes in 1980. Nationwide, women and children make up four-fifths of the poverty population.

Many women and girls are not prepared for the roles they must assume and do not make educational choices appropriate to their abilities and needs. The economic and human costs of sexism in education are high. Not only the amount but the kind of education women receive makes a difference. Education must respond to social and economic changes and ensure that students are prepared for them.

Female college graduates earn less than male high school dropouts



ELEMENTARY AND SECONDARY EDUCATION

More than 697,700 students - 353,500 secondary students and 344,000 children in elementary school - were enrolled in Minnesota public schools in the 1983-84 school year. An additional 92,700 were enrolled in private schools.

Boys and girls have been educated differently based on assumptions about the roles they have been expected to fill as adults. Despite the changes in education and society, the expectation that certain courses, activities and behaviors are natural or necessary for boys and others more suitable for girls continues to influence school life.

Girls today receive conflicting messages which hinder them in preparing for their economic future. A Minnesota Youth Poll, commissioned for a conference this past spring on "The Economic Future of Girls and Young Women", documented the ambiguity girls experience when thinking about their future. Findings included:

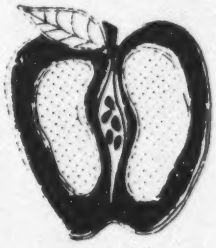
- Girls believed that work was part of their future but did not seem aware of statistics showing how many years most of them would spend supporting their families; and

- High school students of both sexes felt girls were more protected and sheltered than were boys, and they believed that this treatment underminded the young women's self-confidence and competence.

A poll of Twin Cities area parents by Minnesota Opinion Research, Inc., also commissioned for the conference, showed that parents' attitudes tend to contribute to girls' ambivalence regarding appropriate career and lifestyle choices.

Ongoing research indicates that teachers frequently treat girls and boys differently in everyday classroom interaction - often without knowing that they do so. In one study adult tutors, working with elementary school students who completed an assignment, were most likely to tell high-achieving boys that they were competent, but to tell high-achieving girls that the assignment was easy. Thus, the cause for the children's identical achievement was viewed very differently - simply on the basis of their sex.

A survey of educators in Michigan documented the problem of identifying how schools help perpetuate sexism. The study showed that educators - administrators, teachers, and counselors - support the concept of equal education in the schools, but they do not recognize anything in their own behavior that might contribute to the problem.



Studies of textbooks during the 1970s showed extensive evidence of sex-role stereotyping. In 1984 the Roseville League of Women Voters released a study of elementary readers in three suburban school systems. It showed continued stereotyping, although it concluded that books with a later copyright generally contain less stereotyping. However, most of the books reviewed in the study, like those generally in use in the state, were copyrighted before 1980. Some of the findings were:

- All but one of the publishers featured more boys than girls in their stories. Four of the seven publishers had twice as many stories featuring boys as stories featuring girls. In addition, children were shown in stereotypical behaviors in most stories. All publishers featured more male than female animal stories.
- Of the six publishers including biographies in their series, all but one had more male than female biographies. The ratio of male to female biographies in one series was 7 to 1 and in another 5 to 1.
- Every publisher included more male than female occupations. In addition, females were shown more often in traditional female occupations.
- Every publisher used more illustrations of males than females. Two publishers featured illustrations of males and females together more often than either of the two sexes separately.

MATH ASSESSMENTS

Grade	Year	Boys Performance	Girls Performance	Boys Advantage
4	1974-75	61.0%	62.9%	-1.9%
	1978-79	77.0%	77.8%	-0.8%
	1982-83	74.3%	75.4%	-1.1%
8	1974-75	56.3%	57.2%	-0.9%
	1978-79	64.4%	64.4%	Even
	1982-83	69.3%	68.9%	+0.4%
11	1974-75	54.3%	51.8%	+2.5%
	1978-79	66.2%	62.9%	+3.3%
	1982-83	67.9%	66.3%	+1.6%

SCIENCE ASSESSMENTS

Grade	Year	Boys Performance	Girls Performance	Boys Advantage
4	1978-79	59.7%	58.3%	+1.4%
	1982-83	58.8%	57.8%	+1.0%
8	1978-79	57.2%	53.3%	+3.9%
	1982-83	59.7%	55.4%	+4.3%
11	1978-79	59.4%	54.1%	+5.3%
	1982-83	60.3%	54.5%	+5.8%

In an increasingly technological society, math and science experience is highly valued and financially rewarded, while lack of a strong background in these subjects can be a distinct disadvantage. With growing emphasis on high tech industries there is concern that female students receive the necessary preparation in math and science in order that they benefit from the technological and economic changes occurring today.

Attitudes influence learning. Confidence in learning has to do with the belief that one has the ability to learn and to perform well in a subject area. Even when girls are achieving as well as boys, they report less confidence in their ability to learn mathematics. This is apparent by at least the sixth grade and lasts throughout high school. It influences how hard girls study, how much they learn and their willingness to elect mathematics courses.

Information from the Minnesota Department of Education shows that girls are nearly half or more of students in three of the six areas of higher math and science.

MATH	
Algebra II	49.1 %
Geometry	49.8 %
Pre-Coll. Math	43.8 %
SCIENCE	
Biology	53.3 %
Chemistry	49.9 %
Physics	37.3 %

Recent performance assessment data collected by the Department of Education for math and science compare achievement of male and female students in grades 4,8 and 11 over several years. The results indicate that the relative scores of females to males have improved somewhat in math, but show little improvement in science.

- In math girls out-performed boys at grade 4. Girls and boys performed at about the same level at grade 8. Boys out-performed girls at grade 11, although their advantage has decreased in the last year.

- In science boys out-performed girls at all grade levels, and the boys advantage increased at the higher grade levels.

Girls high math scores in the early grades refute the common argument that there is a genetic basis for female "math anxiety." Rather, these studies show that girls respond to negative messages about their mathematical ability.

A bright spot is the most recent Scholastic Aptitude Test (SAT) results in math. The significant increase in the 1983 math average was attributed largely to the rising scores of women.

Much has been assumed about girls and their abilities and interest in computers. A 1983 study at the University of Minnesota Child Care Center found that pre-school girls were just as likely to use computers as the boys. Other research found that young female students liked to use computers as much as male students but were not as likely to compete for the use of them. As a result boys were more likely to be the dominant computer users.

Vocational education plays an important role in developing skills needed to compete in the labor market for better paying jobs, particularly in technical and industrial fields.

Female students represent a slight majority, 54 percent, of the students enrolled in high school vocational programs in Minnesota. However, female participation is not evenly divided among the vocational areas.

Young women are the majority of students in distributive education, health, home economics and business and office. There are small numbers of young women in agriculture, technical and trade-industrial courses.

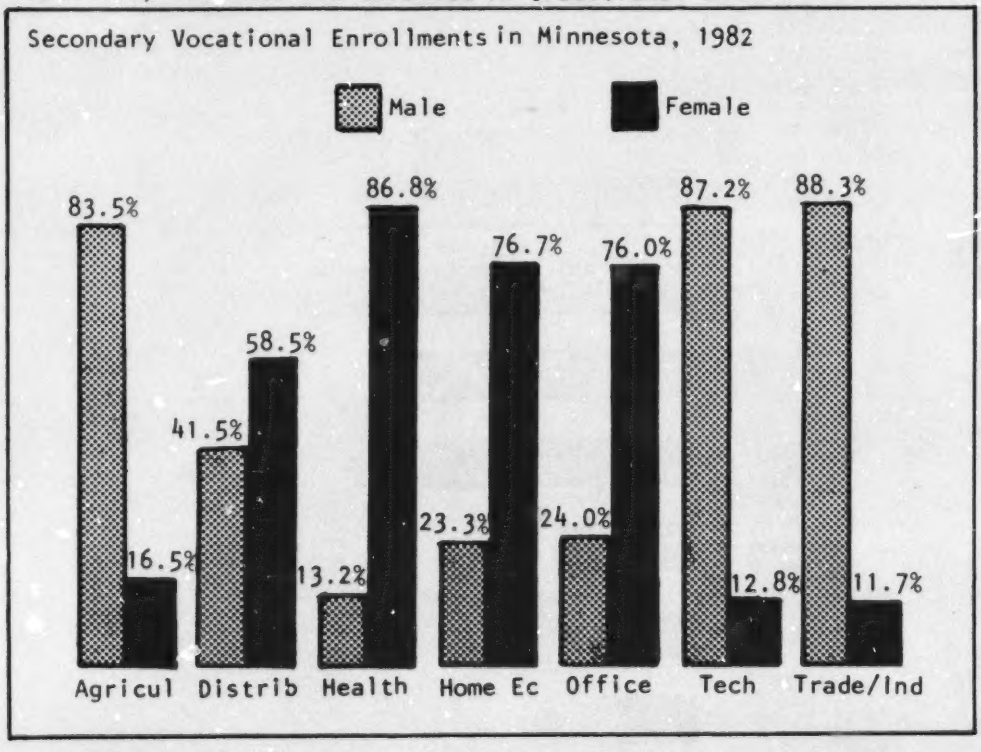
Over four out of five female students are enrolled in just two course areas, home economics and business and office. Less than one in three male students are enrolled in these areas.

Male students are most likely to be enrolled in trade-industrial programs. This area combined with agriculture accounts for almost two- thirds of all male vocational enrollments. By contrast, less than ten percent of female students are enrolled in these two areas.

Of the several hundred courses offered statewide, two-fifths are male courses, over one-third are integrated courses and one-quarter are female courses. In fact, about ten percent of programs are either all-female or all-male.

Female students are more likely than male students to be enrolled in integrated programs. Very few students are enrolled in non-traditional programs. Such programs account for only 1 in 17 female students and 1 in 11 male students.

Secondary students are enrolled in traditional areas



STAFF PATTERNS

Students are influenced by adult role models in their schools. Despite attention given to the effects of stereotyping, employment patterns in Minnesota public schools reaffirm students impressions that certain jobs belong to men and others to women.

Women held 57 percent of the elementary and secondary teaching positions in the 1983-84 school year - close to the 56 percent they held in 1977-78. In fact most of the numbers for 1983-84 are similar to those of 1977-78. Male and female staff members continued to be unevenly distributed among grade levels and subject areas.

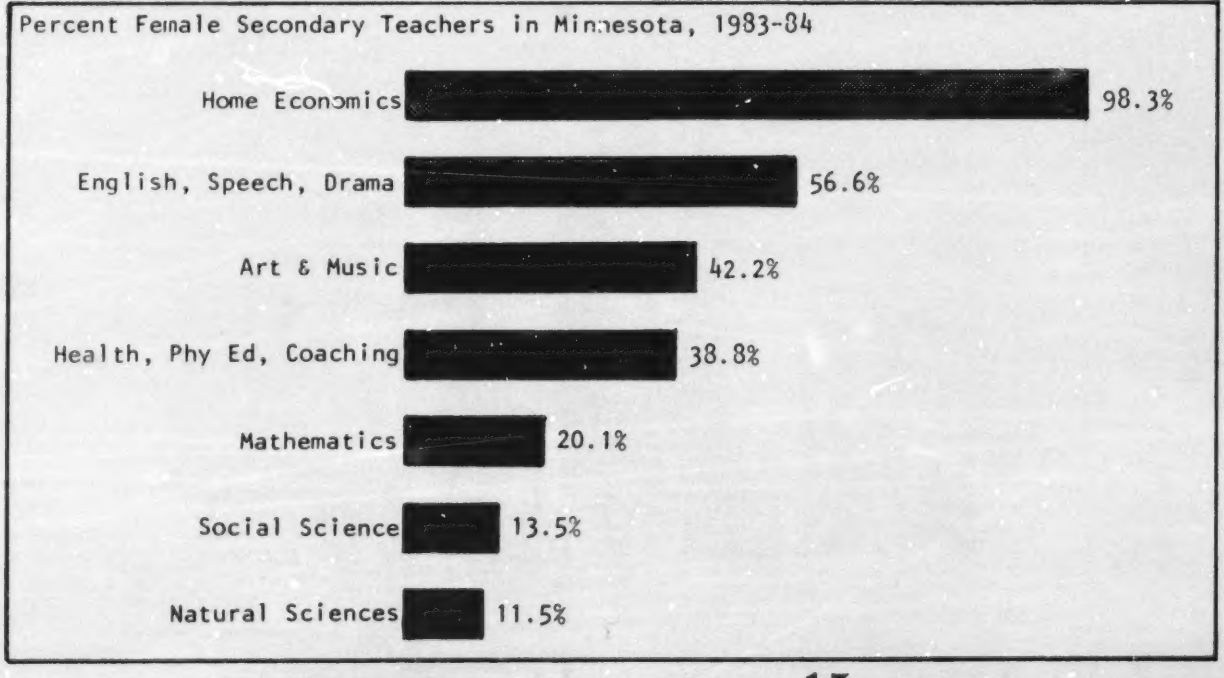
Women accounted for over three-quarters of the elementary and secondary teachers. The percent of secondary teachers who were female dropped from 43 to 34 percent over those six years.

Women were the majority of teachers of foreign languages and special education, while men were the majority of teachers of math, science and social studies. The vocational areas followed traditional patterns, with males dominating in agriculture, business and office, industrial arts, technical and trade-industrial and females in distributive education, health and home economics.

In the area of administration there has been some growth in the representation of women. In 1983-84 women accounted for 14 percent of elementary principals, up from ten percent in 1977-78. Over those six years the number of female secondary principals increased from less than one percent to seven percent. The number of female superintendents grew from .002 percent to three percent during this time. There are currently ten women holding full superintendency positions.

Women were the majority of librarians, social workers and reading consultants. The number of female counselors dropped slightly from 27 to 26 percent. Among other support staff women were almost all of teacher aides and clerical staff and men were almost all of craft workers.

Women teach in traditional subject areas



SUMMARY

The facts gathered from course enrollments and staff patterns provide evidence for assessing the status of women and girls in education. It is often easier to produce the evidence than to pinpoint causes and solutions of sex equity issues.

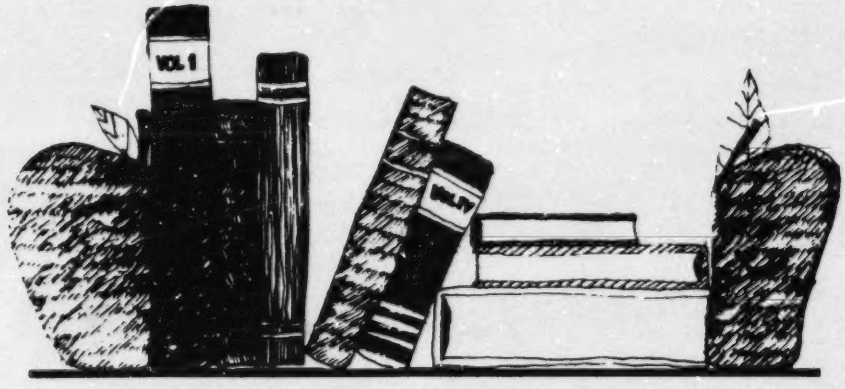
Current student enrollment and staff patterns are the result of many years of bias and discrimination. The stereotyping never truly reflected the diversity among individuals, yet, despite the changing times it persists.

There is no doubt that the initiatives of the 1970s have helped to broaden opportunities for women and girls in education. The most visible change has been in the area of athletics - largely the result of the passage of laws at the state and federal level.

The recent Olympics provide an example of the impact the law has had. American women won 44 percent of the gold medals and 32 percent of all medals in women's events. Of the 200 American women competitors more than 170 received their training in a college athletic programs which probably did not exist before 1972. More than 70 athletic scholarships aided these women.

A recent Supreme Court decision narrowed the scope of the ban on sex discrimination in education prohibited by federal law. This has raised concern about equity efforts. Such legislation is vital to improving educational institutions so they may more effectively meet the needs of all students and the needs of society for the fuller utilization of the talents of its members.

Education alone cannot erase sexism, but can make a difference by ensuring equal opportunity for all who study and work in our schools. The ever accelerating rate of social change demands that efforts to achieve equity continue and expand. Educational equity for women and girls is an essential component of the quest for educational excellence.



RECOMMENDATIONS

1. Propose legislation modeled after Title IX to ensure sex equity in K-12 education. Include an appropriation for staff and implementation, including promulgation of rules.

2. Provide additional staff to the Department of Education to promote, replicate and facilitate the use of existing exemplary sex equity projects throughout the state educational system and to design and present inservice training. Require that staff demonstrate experience and ability in using and teaching sex equity materials.

3. Appropriate funds to the Department of Education to maintain the Minnesota Civil Rights Information System (MINCRIS), to report MINCRIS results to local districts, to assist schools in analyzing MINCRIS data and to conduct compliance reviews.

4. Monitor the sex equity provisions included in the evaluation of the recently established technology demonstration sites, including the reporting of student participation by sex, quality of participation and amount of time spent with equipment. Incorporate similar provisions into all requests for proposals and evaluations of education grants and programs receiving state funding or oversight.

5. Encourage districts to develop community education early childhood education programs which focus on bias-free curriculum and include parenting and career development.

6. Adopt a staff development training requirement for all certified education personnel as part of the continuing education credits currently required for recertification. The component should contain at least eight hours of sex equity training and include sensitivity to issues of discrimination, current laws and research and administrative issues, including personnel assignments.

7. Appropriate funds to the Department of Education to provide incentive grants to school districts which develop inservice programs on sex equity for their staff.

8. Provide continued funding for the Equal Educational Opportunities position at the Department of Education.

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